

## **APPENDIX C**

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### **FUTURE WATER USES BY MUNICIPALITIES**

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**Draft Environmental Impact Statement  
Allocation of Water Supply and  
Long-Term Contract Execution  
Central Arizona Project**

**Central Arizona Project Allocation  
Administrative Draft Environmental Impact Statement  
Appendix C – Future Water Uses By Municipalities  
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**C.I. INTRODUCTION**

The description of anticipated environmental consequences of implementing the proposed Central Arizona Project (CAP) allocations requires an understanding of the present and future water uses for each water use sector. This appendix provides the details of analyses used to estimate current and future water uses by the 21 municipal and industrial (M&I) sector entities, which would receive an allocation of CAP water. The M&I entities included in the draft Environmental Impact Statement (EIS) and their respective CAP allocations for each alternative are shown in Table C-1.

In addition, a question that arose during scoping was “Will the allocation of additional CAP water to M&I entities cause urban growth that would not otherwise occur?” Conversely, would M&I entities have insufficient water supplies to meet their projected water demands in the absence of the allocation? To address this question, the population projections and resulting water demands for each of the M&I entities were compared to their available water supplies, absent the additional CAP water. If the entity was found to have sufficient water resources available without the additional CAP water, then the entity is estimated to be able to meet its population projections without additional CAP water. In other words, the answer to the question raised during scoping would be no, additional CAP water does not induce growth. However, if an entity was found to lack sufficient available water supplies to meet demands, then the additional CAP water could drive direct environmental impacts due to urban growth.

In all cases, the M&I entities recommended to receive additional CAP allocations (Arizona Department of Water Resources [ADWR] letter, Appendix N) were determined to have sufficient available water supplies to meet the projected water demands. The available alternative water supplies include permissible groundwater pumping, other surface water, exchanges and leases associated with the Indian water rights settlements, membership in the Central Arizona Groundwater Replenishment District (CAGRD) and the reuse of effluent.

Fundamental to the description of present and future water uses and to answering the urban growth question is an understanding of four components that impact water uses for the M&I sector. The components are identified below and discussed in the following section:

- ◆ Population projections over the study period (2001 – 2051);
- ◆ Water use rates and projected water requirements;
- ◆ Water supplies available to the meet water requirements; and
- ◆ Projection of timing and volume of water use over the study period.

It should be noted that the water supply and water use constraints imposed by existing State and Federal laws and agreements are reflected in the analysis of available water supply and

projected water use requirements. These constraints include but are not limited to the following:

- ◆ Arizona Groundwater Management Act (GMA) conservation requirements (outlined in the Third Management Plan [TMP]);
- ◆ Pledged water supply for designation of Assured Water Supply (AWS);
- ◆ Existing CAP allocation;
- ◆ Proposed CAP allocation;
- ◆ Existing water supply provided through Indian water rights settlements (by lease or exchange);
- ◆ Other surface water supplies; and
- ◆ CAGR obligations.

## **C.II. DISCUSSION**

### **C.II.a. Population Projections**

Population projections were prepared for the M&I entities. The population projections were developed from Department of Economic Security (DES) 1997 population projections for water planning (DES, 1997). For entities in large municipal water providers in Maricopa County, the population projections were based on municipal planning areas (MPAs) for 2000 through 2050 consistent with the projections used by ADWR for water planning. The projections used five-year time steps. It was assumed that the population projections were valid for the period 2001 through 2051. For entities in Pima County and private water companies, the population projections used by ADWR in recommending allocation of CAP water were used through 2040 and extrapolated to 2051. The population projections for the M&I entities are listed in Table C-2.

The DES data were used in this analysis because the projections are based on consistent methodology and assumptions for all entities. The DES data formed the population base for ADWR in their allocation recommendation. Additionally, the DES data are the most current state-wide population projections available. However, current planning efforts for some entities in Maricopa County are using population projections that are higher than the 1997 data. For example, the West Salt River Valley CAP Subcontractors (WESTCAPS) group is using population projections that were developed by the individual entities for the period 2000 through 2020. A review of these data show that the WESTCAPS' projections may be as much as 70 percent higher than the 1997 DES data.

The result of using the DES data may be that the population projections used in this study may not completely reflect current growth trends and could understate water demands. It is

unclear, however, if current growth trends used by some entities (i.e., the WESTCAPS group) reflect long-term growth or are representative of short-term growth. Population projections are sensitive to temporal variations in economic conditions. For example, population projections made during the recession of the early 1980s have understated population growth to date. Conversely, current projections are also likely influenced by the current economic expansion.

### **C.II.b. Water Use Rates and Projected Water Use Requirements**

The water use rates were developed from the ADWR TMP for the Phoenix and the Tucson active management areas (AMAs) (ADWR, 1999). The water use rates were specified in gallons per capita per day (gpcd) as mandated by the GMA. The gpcd rates were selected from the final conservation requirement in the management period (2005 – 2010) outlined for each M&I entity, as shown in Table C-3. The gpcd rate used for this analysis includes a seven percent increase to accommodate unaccounted-for water. Lost and unaccounted-for water includes leaks, spills, and flows too low to meter. The seven percent increase was derived from a review of several water providers including the cities of Peoria, Scottsdale, and Phoenix. Lost and unaccounted-for water is typically between five and 10 percent of total water use. Several of the smaller entities did not have conservation requirements listed in the TMP. For those not listed, the conservation requirement of a similar water provider was used (see Table C-3).

The projected water demands were calculated by multiplying the projected population by the water use rate (gpcd) and converting to acre-feet annually (afa). The projected water demands for each entity are shown in Table C-4.

The water use rates used in this study are based on ADWR TMP conservation requirements and are held constant through the study period. The conservation requirements were developed by ADWR to enforce conservation practices pursuant to provisions in the GMA. In each planning period, the conservation goals are increased with the goal of achieving safe yield by 2025.

Using the conservation requirements to estimate water use rates in the future may understate water uses in the early years of the study (2001 through 2010). However, the conservation requirements are phased in over the TMP planning period (2000 through 2010). The impact of the assumption likely would be muted by the phase-in of conservation requirements.

The water use rates are held constant over the study period. It is likely that ADWR will require additional conservation requirements after 2010 pursuant to the requirements of the GMA in the Fourth and Fifth Management Plans. The impact of this assumption may be to overstate water requirements after 2010 for the entities.

It should be noted that most large water providers reduce water use over time (Table C-4). For example, the City of Mesa has reduced the water demand rate 11 percent from 211 gpcd in 1980 to 187 gpcd in 1995. Exceptions to this are generally related to expansion of non-residential uses such as golf courses and low person per household domestic uses. The city of Scottsdale's increase in water use rates from 1980 to 1995 is related to these issues.

**C.II.c. Water Supplies Available**

Each entity's water supply available to meet the water requirement was estimated from available information including AWS designation data, GMA annual report data, and water resource plans. The water supply projected to be available to each entity is shown in Table C-5. The water supplies included:

1. Existing CAP Allocation – Water supply allocated to the entity in the 1983 allocation process and additional CAP water provided through assignments (see Appendix B for a complete listing).
2. Additional CAP Allocation – As contemplated in the proposed allocations.
3. Other Supplies
  - a. Surface Water – Verde and Salt River water, as applicable
  - b. Groundwater “Allowance” – Groundwater supply provided pursuant to the GMA includes groundwater allowance and pumping due to incidental recharge. For this analysis, incidental recharge is held at current levels and is assumed not to increase through time.
  - c. Additional CAP Water – CAP water provided through exchanges and leases, generally through Indian water rights settlements.
4. Settlement Alternative Gila River Indian Community (GRIC) Lease and Exchange – CAP water provided pursuant to a GRIC water rights settlement that includes the ability to lease CAP water for use outside Reservation lands and CAP/reclaimed water exchanges with Mesa and Chandler.
5. Effluent Reuse – The volume of effluent pledged to meet demands as outlined in AWS designation documents. In the case of the City of Phoenix, additional effluent was assumed to be available to meet water demands and reduce the volume necessary from the CAGRDR.
6. CAGRDR Membership – Membership in the CAGRDR was included as a water supply. Several of the entities are currently service area members and/or have pledged membership to obtain AWS designation. Membership in the CAGRDR is assumed to be the most expensive water supply and was assumed to meet the last increment of demand after other supplies were used or as specified by existing agreements. In addition, it was assumed that the total demand for CAGRDR services from the entities could not exceed 200,000 afa. It was also assumed that the CAGRDR members could overcome physical availability limitations by using recent changes in the CAGRDR laws that now allow for limited direct delivery of water from CAGRDR to members.

M&I entities in the AMAs must be granted 100-year AWS designations (or certificates) by ADWR in order to legally subdivide and sell land. In order to have their AWS applications approved by ADWR, M&I entities must meet stringent criteria including the proof of physically



and legally available water. Supplies that count toward an AWS include, among others, CAP subcontracts, Indian leases, and CAGRD membership. Purchase of CAP water through an interim contract or the Recharge Pool would not be sufficient because there is not a 100-year commitment of its availability. M&I entities do and are expected to continue to purchase water from the Recharge Pool and store water for use during peak demand times and shortage to support demonstration of an AWS.

The entities with their 2051 demands, existing allocations, proposed allocations, other non-CAP supplies, and assumed effluent and CAGRD supplies are shown in Table C-6. The table shows the assumed water deliveries for each entity under the Settlement Alternative, Non-Settlement Alternative 1 (equivalent to Non-Settlement Alternative 3A), and No Action (equivalent to Non-Settlement Alternative 2 and Non-Settlement Alternative 3B). The table shows the increment of water supply that is gained by the entities under the Settlement Alternative.

It is assumed that M&I water users in the Phoenix area would use CAP water to satisfy only water demands outside of the Salt River Project (SRP) service area. This is based on ADWR data that show sufficient SRP supplies are available to meet M&I demands within the SRP service area.

The non-CAP allocation supplies were derived from each entity's AWS application and water resource master plans (where available). It is assumed that each entity either already has or would construct facilities necessary to fully use their CAP allocations. In addition, the effluent use is assumed to remain constant, consistent with their AWS application. Even if additional effluent is produced with additional population growth, the volume of effluent used is fixed. It is also assumed that CAGRD membership or pledged membership would not be the preferred vehicle to obtain a supply of water. Consistent with statements made by CAGRD staff in CAGRD workshops of December 1999 and January 2000, this draft EIS will assume CAGRD membership would be used only to meet the last increment of demand unmet by CAP or other sources. Exceptions to this generalization are for those entities that currently have pledged CAGRD membership. In most cases, entities that have CAGRD membership have not pledged effluent as a component of their supply. This is due to the high cost of CAGRD membership and the requirement of physical availability of groundwater for most members.

It is assumed that M&I CAP water costs would continue consistent with CAWCD pricing policy, as described in Appendix A.

The Pima County entities, in general, follow the hierarchy illustrated above except that those entities generally do not have additional surface water supplies to use. Further, it has been assumed that the Pima County entities will take and use CAP water as soon as it is available, using mechanisms consistent with local laws and regulations.

It should be noted that the foregoing are broad generalizations. Each individual entity makes unique water supply delivery decisions based on its unique circumstances. The following worksheets (Tables C-7 to C-27) illustrate the estimated water deployment of water supplies for each entity per alternative.

### **C.III. DEVELOPMENT OF ESTIMATED COSTS OF ALTERNATIVE SUPPLIES**

The figures expressed in this estimated cost analysis, or constant dollar analysis, are expressed in year 2000 values. Where applicable, a discount rate of 6.875 percent was assumed and payments for municipal bonds were assumed over a 25 year period.

#### **C.III.a. CAGRD**

The total cost for pumping groundwater via CAGRD membership was calculated by summing up the costs for electric power, maintenance, Pump tax and CAGRD charges; wellhead treatment costs were excluded. The electric power required for pumping water was calculated by the product of the terms for pump efficiency (70 percent assumed), water density (1.94 slug/ft<sup>3</sup>), acceleration of gravity (32.174 ft/s<sup>2</sup>), flow or pumping demand (ft<sup>3</sup>/s), and total head (ft). The cost for electricity was set at \$0.06/(kW\*hr) and the cost for power was figured by multiplying the power required for pumping by the unit cost for electricity. This formulation was applied for all entities and for all years from 2001 to 2051, and captured the variable costs associated with changing demands and groundwater pumping depths; and other associated costs proportional to either of the two.

The flows, or pumping demands, were provided for all entities and were expressed in terms of AF/yr, for each and every year. The total system head for pumping is comprised of the depth to groundwater term (which was developed in the groundwater analysis [See Appendix I] and varied every year for all entities), an operating pressure head of 80 psig (which converts to 184.6 feet of head), and an assumed system pumping head loss of 5.4 feet. The mean, non-zero, energy cost for pumping groundwater was calculated to be \$25.83/AF and the figures for all entities varied from \$15.01/AF to \$35.95/AF.

Other related costs were figured as follows: O&M was assumed to be equal to half the pumping energy cost and varied with year to year changes in demand and pumping depth. Pump tax and CAGRD charges used are \$2.75 and \$188 per AF pumped, respectively.

#### **C.III.b. Tertiary Treatment and Reuse**

The costs for the reuse of treated effluent incorporates the costs of building and operating a Class IV tertiary treatment facility as well as secondary, non-potable, water distribution system. The cost for building a tertiary WWTP was based a typical cost figure of 350 million dollars for a plant with a capacity of 100 mgd. Over a 25 year period, the capital cost was figured to be roughly \$126/AF. For tertiary treatment, the O&M costs (including pumping and chemicals) are estimated to be \$16/AF. This figure is highly variable and based upon site specific conditions. The cost for a secondary distribution system for the reuse of treated water on "turf" was developed assuming a cost of \$100/ft for pipeline installation and evaluating current land use densities. Per square mile of urbanized land, a ratio of 1,300 feet of transmission line was applied. The figure for pipeline cost was doubled to capture all system capital costs and a value \$255,000 per square mile of city was derived. Assuming a 25 year bond, the total capital cost was estimated to be about \$80/AF, and the typical system O&M cost is estimated to be \$15/AF. It is assumed that the distribution costs for treated water are lower than potable water distribution because fewer customers are served with bulk purchases, and

require fewer overhead expenses.

**C.III.c. CAP Allocation**

The cost for CAP Allocation direct use was figured by summing the following terms: \$54/af for CAP energy and fixed pumping costs, \$48/af CAP capital costs, \$37/af for treatment plant O&M costs, and \$15/af for distribution costs, for a total of \$154/af.

TABLE C-1  
CAP Allocation Draft EIS  
M&I ENTITIES AND CAP ALLOCATIONS PER ALTERNATIVE

M&I Entity	Current Allocation <sup>1</sup>	PROPOSED CAP ALLOCATIONS			PROPOSED TOTAL CAP ALLOCATION				
		Settlement Alt. Proposed Allocation <sup>2</sup>	Non-Settlement Alt. 1 Proposed Allocation <sup>2</sup>	Non-Settlement Alt. 3B Proposed Allocation <sup>3</sup>	Settlement and Non-Settlement Alternative 1	Non-Settlement Alternative 2	Non-Settlement Alternative 3A	Non-Settlement Alternative 3B	No Action Alternative <sup>4</sup>
Arizona Water Company-Apache Junction	6,000	285	285	312	6,285	6,000	6,000	6,312	6,000
AVRA Water Cooperative	0	808	808	884	808	0	6,000	884	0
Cave Creek Water Company	1,600	806	806	882	2,406	1,600	1,600	2,482	1,600
City of Chandler	3,668	4,986	4,986	5,454	8,654	3,668	3,668	9,122	3,668
Chaparral City Water Company	6,978	1,931	1,931	2,112	8,909	6,978	6,978	9,090	6,978
Community Water Company of Green Valley	1,337	1,521	1,521	1,664	2,858	1,337	1,337	3,001	1,337
City of El Mirage	0	508	508	556	508	0	0	556	0
City of Glendale	14,183	3,053	3,053	3,340	17,236	14,183	14,183	17,523	14,183
City of Goodyear	3,381	7,211	7,211	7,889	10,592	3,381	3,381	11,270	3,381
H2O Water Company	0	147	147	161	147	0	0	161	0
City of Mesa	36,388	7,115	7,115	7,784	43,503	36,388	36,388	44,172	36,388
Metropolitan Domestic Water Improvement District	8,858	4,602	4,602	5,034	13,460	8,858	8,858	13,892	8,858
Town of Oro Valley	9,699	3,557	3,557	3,891	13,256	9,699	9,699	13,590	9,699
City of Peoria	18,709	5,527	5,527	6,046	24,236	18,709	18,709	24,755	18,709
City of Phoenix	113,914	8,206	8,206	8,977	122,120	113,914	113,914	122,891	113,914
City of Scottsdale	49,029	2,981	2,981	3,261	52,010	49,029	49,029	52,290	49,029
Town of Superior/Arizona Water Company-Superior	0	285	285	312	285	0	0	312	0
City of Surprise	7,373	2,876	2,876	3,146	10,249	7,373	7,373	10,519	7,373
City of Tucson	138,920	8,206	8,206	8,977	147,126	138,920	138,920	147,897	138,920
Vail Water Company	786	1,071	1,071	1,172	1,857	786	786	1,958	786
Valley Utilities Water Company	0	250	250	273	250	0	0	273	0

1 - Pursuant to 1983 Record of Decision and subsequent assignments. Does not include existing leases or exchanges.

2 - Based on ADWR Allocation Recommendation.

3 - Non-Settlement Alternative 3B evaluates the allocation of 71,815 afa of non-Indian agriculture-priority CAP water distributed in the same proportion as the 65,647 afa of M&I - priority water proposed to be allocated under the Settlement Alternative and Non-Settlement Alternative 1. It is assumed that the M&I entities would directly use 65,647 afa of the 71,815 afa and recharge the balance.

4 - Assumes no additional CAP water supply is made available during the study period.

TABLE C-2  
CAP Allocation Draft EIS  
POPULATION PROJECTIONS M&I ENTITIES

M & I ENTITY	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051
Arizona Water Company-Apache Junction	22,621	24,361	25,957	27,403	28,718	29,874	30,861	31,675	32,382	33,046	33,738
AVRA Water Cooperative	5,623	7,031	8,440	9,848	11,257	12,651	14,045	15,439	16,833	18,227	19,621
Cave Creek Water Company MPA	4,181	6,259	8,981	11,163	12,579	13,682	14,705	15,599	16,538	16,615	16,615
City of Chandler MPA	169,395	198,252	221,664	240,787	258,915	271,877	285,067	298,402	305,265	315,615	322,164
Chaparral City Water Company	22,138	30,262	38,385	46,509	54,632	54,709	54,787	54,864	54,941	55,018	55,096
Community Water Company of Green Valley	14,290	16,101	17,911	19,722	21,532	22,656	23,780	24,903	26,027	27,151	28,275
City of El Mirage MPA	5,846	5,914	5,927	6,078	7,273	7,855	9,141	10,815	13,304	17,836	24,026
City of Glendale MPA	216,843	237,178	260,561	288,225	305,164	336,382	339,219	339,809	340,320	340,759	341,189
City of Goodyear MPA	19,640	28,204	38,082	58,031	92,579	128,809	172,400	214,989	263,047	282,663	293,050
H2O Water Company	793	886	979	1,072	1,165	1,281	1,397	1,513	1,629	1,745	1,861
City of Mesa MPA	425,238	480,164	540,608	567,741	593,962	621,618	635,668	644,053	652,461	660,662	664,700
Metropolitan Domestic Water Improvement District	47,750	54,630	61,509	68,389	75,269	79,966	84,663	89,360	94,057	98,754	103,451
Town of Oro Valley	27,362	33,392	39,423	45,453	51,484	58,143	64,801	71,460	78,118	84,777	91,435
City of Peoria MPA	93,675	126,408	141,185	167,355	183,815	197,363	213,030	234,073	258,608	294,045	358,317
City of Phoenix MPA	1,288,409	1,404,741	1,532,540	1,658,983	1,782,105	1,943,817	2,116,851	2,270,156	2,420,969	2,500,913	2,548,666
City of Scottsdale MPA	204,892	242,179	270,763	294,181	306,713	330,308	356,656	372,141	374,032	374,293	374,482
Town of Superior/Arizona Water Company-Superior MPA	3,483	3,516	3,550	3,583	3,616	3,632	3,647	3,663	3,678	3,694	3,709
City of Surprise MPA	26,506	37,245	41,278	47,338	60,955	70,963	95,964	123,859	156,667	191,379	235,977
City of Tucson	644,223	691,429	738,635	785,841	833,047	882,295	931,543	980,791	1,030,039	1,079,287	1,128,535
Vail Water Company	3,100	5,156	7,211	9,267	11,323	12,706	14,090	15,473	16,856	18,239	19,623
Valley Utilities Water Company	7,726	8,693	9,659	10,626	11,593	12,735	13,877	15,019	16,161	17,303	18,445

Note: Population projections for MPA based on 1997 Arizona Department of Economic Security (ADES) planning population projections.  
All values moved forward so that ADES 2000 = Study year 2001. All other population data based on ADWR population projections provided in ADWR Allocation Recommendation, December 1999. Data extended to 2041 to 2051.

TABLE C-3  
CAP Allocation Draft EIS  
M&I ENTITY PROJECTED WATER USE RATES

M&I ENTITY	RESIDENTIAL USE	NON-RESIDENTIAL	LOST & UNACCOUNTED	TOTAL
Arizona Water Company-Apache Junction	100	33	10	143
AVRA Water Cooperative	108	8	8	124
Cave Creek Water Company	107	45	11	163
City of Chandler	119	66	13	198
Chaparral City Water Company	133	119	18	270
Community Water Company of Green Valley	110	21	9	140
City of El Mirage	100	39	10	149
City of Glendale	118	52	12	182
City of Goodyear	100	117	15	232
H2O Water Company	103	51	11	165
City of Mesa	103	51	11	165
Metropolitan Domestic Water Improvement District	132	25	11	168
Town of Oro Valley	128	40	12	180
City of Peoria	102	45	10	157
City of Phoenix	123	66	13	202
City of Scottsdale	159	71	16	246
Town of Superior/Arizona Water Company-Superior	100	18	8	126
City of Surprise	137	62	14	213
City of Tucson	106	37	10	153
Vail Water Company	122	23	10	155
Valley Utilities Water Company	100	18	8	126

TABLE C-4  
CAP Allocation Draft EIS  
M&I ENTITY PROJECTED WATER DEMANDS

M&I ENTITY	2001	2006	2011	2016	2021	2026	2031	2036	2041	2046	2051
Arizona Water Company-Apache Junction	11,393	13,324	15,129	16,763	18,250	19,556	20,673	21,593	22,392	23,142	23,924
AVRA Water Cooperative	755	944	1,133	1,322	1,511	1,698	1,885	2,073	2,260	2,447	2,634
Cave CreekWater Company	762	1,140	1,636	2,034	2,292	2,493	2,679	2,842	3,013	3,027	3,027
City of Chandler	37,560	43,959	49,150	53,390	57,410	60,284	63,209	66,165	67,687	69,982	71,434
Chaparral City Water Company	6,687	9,140	11,594	14,047	16,501	16,524	16,547	16,571	16,594	16,617	16,641
Community Water Company of Green Valley	2,244	2,528	2,812	3,096	3,381	3,557	3,734	3,910	4,087	4,263	4,439
City of El Mirage	974	985	987	1,013	1,212	1,309	1,523	1,802	2,216	2,971	4,003
City of Glendale	44,183	48,326	53,090	58,727	62,178	68,539	69,117	69,238	69,342	69,431	69,519
City of Goodyear	5,108	7,335	9,905	15,093	24,079	33,501	44,839	55,916	68,415	73,517	76,218
H2O Water Company	157	175	193	212	230	253	276	299	322	345	368
City of Mesa	78,489	88,627	99,784	104,792	109,632	114,737	117,330	118,878	120,429	121,943	122,689
Metropolitan Domestic Water Improvement District	8,985	10,280	11,574	12,869	14,164	15,047	15,931	16,815	17,699	18,583	19,467
Town of Oro Valley	5,509	6,724	7,938	9,152	10,367	11,707	13,048	14,389	15,730	17,070	18,411
City of Peoria	16,504	22,272	24,875	29,486	32,386	34,773	37,533	41,241	45,563	51,807	63,131
City of Phoenix	291,859	318,211	347,161	375,804	403,694	440,326	479,523	514,251	548,414	566,524	577,341
City of Scottsdale	56,482	66,761	74,641	81,096	84,551	91,055	98,318	102,587	103,108	103,180	103,232
Town of Superior/Arizona Water Company-Superior	493	497	502	507	511	514	516	518	520	522	525
City of Surprise	6,354	8,928	9,895	11,347	14,612	17,011	23,004	29,690	37,555	45,876	56,566
City of Tucson	110,415	118,506	126,597	134,688	142,779	151,219	159,660	168,101	176,542	184,982	193,423
Vail Water Company	568	945	1,323	1,700	2,077	2,330	2,584	2,838	3,091	3,345	3,599
Valley Utilities Water Company	1,093	1,229	1,366	1,503	1,640	1,801	1,963	2,124	2,286	2,447	2,609

Table C-5  
CAP Allocation Draft EIS  
M&I Entities - Comparison of Historic Water Use Rates

<b>M &amp; I Entity</b>	<b>1980 gpcd</b>	<b>1985 gpcd</b>	<b>1995 gpcd</b>
Arizona Water Company - Apache Junction	-	141	206
AVRA Water Cooperative	108	111	113
Cave Creek Water Company	217	162	276
Chaparral City Water Company	617	302	284
City of Chandler	229	210	225
City of El Mirage	118	162	173
City of Glendale	212	221	210
City of Goodyear	361	349	269
City of Mesa	211	192	187
City of Peoria	311	198	196
City of Phoenix	267	251	226
City of Scottsdale	299	323	327
City of Surprise	-	-	-
City of Tucson	160	161	159
Community Water Company of Green Valley	181	132	140
H2O Water Company	173	162	-
Metropolitan Domestic Water Improvement District	208	199	182
Town of Superior/Arizona Water Company-Superior	-	104	115
Vail Water Company	110	-	154
Valley Utilities Water Company	144	117	118

Note: gpcd water use from ADWR First Management Plan, Second Management Plan and TMP  
- no data



**Table C-6**  
**CAP Allocation Draft EIS**  
**Preliminary Summary of M&I Entities at 2051**

	TMP gpcd	DEMAND	SUPPLIES				DEMAND	SUPPLIES			DEMAND	SUPPLIES			DEMAND	SUPPLIES		
		2051 Total Demand	2051 Non-CAP Allocations Supplies <sup>a</sup>	Existing Allocation	Proposed Allocation	GRIC Lease	Settlement Alternative			Non-Settlement Alternatives 1 and 3B			Non-Settlement Alternatives 2, 3A, and No Action Alternative					
							Residual	Effluent	CAGR <sup>d</sup>	Residual	Effluent	CAGR <sup>d</sup>	Residual	Effluent	CAGR <sup>d</sup>	Residual	Effluent	CAGR <sup>d</sup>
Arizona Water Company -Apache Junction <sup>b</sup>	143	11,114	5,114	6,000	285	0	0	0	0	0	0	0	0 <sup>d</sup>	0	0	0		
AVRA Water Cooperative	120	2,634	0	0	808	0	1,826	0	1,826	1,826	0	1,826	2,634	0	2,634			
Cave Creek Water Company	163	6,411	65	1,600	806	0	3,941	2,973	968	3,941	2,973	968	4,746	2,973	1,774			
City of Chandler	198	75,483	60,972	3,668	4,986	5,857	0	0	0	5,857 <sup>h</sup>	5,857	0	10,843	10,843	0			
Chaparral City Water Company	270	16,641	546	6,978	1,931	0	7,186	1,686	5,500	7,186	1,686	5,500	9,117	1,686	7,431			
Community Water Company of Green Valley	140	4,439	0	1,337	1,521	0	1,581	0	1,581	1,581	0	1,581	3,102	0	3,102			
City of El Mirage	149	4,003	460	0	508	0	3,035	560	2,475	3,035	560	2,475	3,543	560	2,983			
City of Glendale	182	69,518	54,428	14,183	3,053	5,857	0	0	0	0	0	0	906 <sup>e</sup>	906	0			
City of Goodyear	232	76,218	23,656	3,381	7,211	5,857	36,113	3,360	32,753	41,970	3,360	38,610	49,181	3,360	45,821			
H2O Water Company	176	368	0	0	147	0	221	0	221	221	0	221	368	0	368			
City of Mesa	165	122,689	74,838	36,388	7,115	5,857	0	959	0	4,348	4,348	0	11,463 <sup>f</sup>	11,463	0			
Metropolitan Domestic Water Improvement District	168	19,467	0	8,858	4,602	0	6,007	0	6,007	6,007	0	6,007	10,609	0	10,609			
Town of Oro Valley	180	18,411	0	2,294	3,557	0	12,560	0	12,560	12,560	0	12,560	16,117	0	16,117			
City of Peoria	157	63,132	15,203	18,709	5,527	5,857	17,835	0	17,835	23,692	0	23,692	29,219	0	29,219			
City of Phoenix	202	577,341	391,461	113,914	8,206	5,857	57,903	41,541	16,362	63,760	41,541	22,219	71,966	41,541	30,425			
City of Scottsdale	249	104,135	48,574	49,029	2,981	5,857	0	1,000	0	0	2,247	0	6,532 <sup>g</sup>	6,532	0			
Town of Superior/Arizona Water Company-Superior	126	525	0	0	285	0	240	0	240	240	0	240	525	0	525			
City of Surprise	214	56,566	21,352	7,373	2,876	0	24,965	3,584	21,381	24,965	3,584	21,381	27,841	3,584	24,257			
City of Tucson	153	193,423	44,733	138,920	8,206	0	1,564	0	1,564	1,564	0	1,564	9,770	0	9,770			
Vail Water Company	164	3,598	0	786	1,071	0	1,741	0	1,741	1,741	0	1,741	2,812	0	2,812			
Valley Utilities Water Company	126	2,609	0	0	250	0	2,359	0	2,359	2,359	0	2,359	2,609	0	2,609			
<b>TOTAL:</b>		<b>1,428,724</b>	<b>741,402</b>	<b>413,418</b>	<b>65,932<sup>c</sup></b>	<b>40,999</b>	<b>179,077</b>	<b>55,663</b>	<b>125,372</b>	<b>206,853</b>	<b>66,156</b>	<b>142,943</b>	<b>273,903</b>	<b>83,448</b>	<b>190,455</b>			

**NOTES:**

<sup>a</sup>Includes SRP water, Gatewater, Indian settlement water Reclaimed Wastewater for Turf, Groundwater, Roosevelt Conservation Space, Salt River Pima-Maricopa Indian Community (SRPMIC)/Roosevelt Irrigation District Exchange, Hohokam Irrigation and Drainage District (HIDD) Buyout, and Poor Quality Groundwater.

<sup>b</sup>Apache Junction reallocated CAP supply would only be provided if Superior does not accept the offered allocation.

<sup>c</sup>Total proposed allocation volume includes Superior and Apache Junction, only one of these entities will receive an allocation, so that the total water available is 64,647 afa.

<sup>d</sup>Apache Junctions residual will be made up from additional groundwater pumping, from outside of the AMA.

<sup>e</sup>Glendale has additional non-CAP supplies that may be applied if it does not receive additional CAP water including the use of effluent pledged in its AWS designation.

<sup>f</sup>Mesa has additional non-CAP supplies that may be applied if it does not receive additional CAP water including the use of effluent pledged in its AWS designation.

<sup>g</sup>Scottsdale has additional non-CAP supplies that may be applied if it does not receive additional CAP water including the use of effluent pledged in its AWS designation.

<sup>h</sup>Chandler has additional non-CAP supplies that may be applied if it does not receive additional CAP water including the use of effluent pledged in its AWS designation.

Table C-7  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Arizona Water Company - Apache Junction  
in Acre-Feet (af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	6,000	6,000	6,000	6,000	6,000	6,000
CAP Allocation - Additional	285	285	285	285	0	0
Groundwater	410	4,829	410	4,829	410	4,829
CAGR	0	0	0	0	285	285
<b>TOTAL DIRECT USE</b>	<b>6,695</b>	<b>11,114</b>	<b>6,695</b>	<b>11,114</b>	<b>6,695</b>	<b>11,114</b>

Table C-8  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
AVRA Water Cooperative  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	0	0	0	0	0
CAP Allocation - Additional	0	808	0	808	0	0
Groundwater <sup>(a)</sup>	755	0	755	0	0	0
CAGR	0	1,826	0	1,826	755	2,634
<b>TOTAL DIRECT USE</b>	<b>755</b>	<b>2,634</b>	<b>755</b>	<b>2,634</b>	<b>755</b>	<b>2,634</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-9  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Cave Creek Water Company  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	1,600	1,600	1,600	1,600	1,600	1,600
CAP Allocation - Additional	806	806	806	806	0	0
Groundwater	65	65	65	65	65	65
Effluent - Direct Use	1,067	2,973	1,067	2,973	1,873	2,973
Effluent - Recharged <sup>(a)</sup>	806	0	806	0	0	0
CAGR D	0	968	0	968	0	1,774
TOTAL USE <sup>(b)</sup>	4,344	6,411	4,344	6,411	3,538	6,411
<b>TOTAL DIRECT USE</b>	<b>3,538</b>	<b>6,411</b>	<b>3,538</b>	<b>6,411</b>	<b>3,538</b>	<b>6,411</b>

Notes:

- (a) To complete the water balance, a certain quantity of water is shown to be recharged for this entity.  
It is possible, however, that instead of recharging the water not needed for direct use (using this water use scenario), the entity would directly use the water and correspondingly offset their groundwater pumping.  
In either case, the incremental impacts would be the same.
- (b) Total use includes direct use and recharge.

Table C-10  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Chandler  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	998	3,668	998	3,668	933	3,668
CAP Existing - Other <sup>(a)</sup>	0	5,973	0	5,973	0	5,973
CAP Allocation - Additional	0	4,986	0	4,986	0	0
GRIC Settlement Lease	0	5,857	0	0	0	0
GRIC Exchange - Direct Use	0	0	0	0	0	0
GRIC Exchange - Recharged <sup>(b)</sup>	0	8,960	0	0	0	0
Groundwater	6,136	6,136	6,136	6,136	6,136	6,136
Other Surface Water <sup>(c)</sup>	0	2,110	0	2,110	0	2,110
SRP and or Other ID Water	36,781	46,753	36,781	46,753	36,781	46,753
Effluent - Direct Use	0	0	0	5,857	0	10,778
Effluent - Recharged <sup>(b)</sup>	0	10,778	0	4,921	65	65
<b>TOTAL USE<sup>(d)</sup></b>	<b>43,915</b>	<b>95,221</b>	<b>43,915</b>	<b>80,404</b>	<b>43,915</b>	<b>75,483</b>
<b>TOTAL DIRECT USE</b>	<b>43,915</b>	<b>75,483</b>	<b>43,915</b>	<b>75,483</b>	<b>43,915</b>	<b>75,483</b>

**Notes:**

- (a) Includes SRPMIC Settlement water, HIDD water, and Indian leases.
- (b) To complete the water balance, a certain quantity of water is shown to be recharged for this entity. It is possible, however, that instead of recharging the water, the entity would directly use the water and correspondingly offset their groundwater pumping. In either case, the incremental impacts would be the same. Recharge could be accomplished using direct or in-lieu facilities. Specific types of water are shown as recharged for convenience in the draft EIS analysis. Actual recharge patterns may differ.
- (c) Includes Roosevelt Conservation Space water and Wellton-Mohawk exchange.
- (d) Total use includes direct use and recharge.

Table C-11  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Chaparral City Water Company  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	6,141	6,978	6,141	6,978	6,141	6,978
CAP Allocation - Additional	0	1,931	0	1,931	0	0
Groundwater	546	546	546	546	546	546
Effluent	0	1,686	0	1,686	0	1,686
CAGR D	0	5,500	0	5,500	0	7,431
<b>TOTAL DIRECT USE</b>	<b>6,687</b>	<b>16,641</b>	<b>6,687</b>	<b>16,641</b>	<b>6,687</b>	<b>16,641</b>

Table C-12  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Community Water Company of Green Valley  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	1,337	0	1,337	0	0
CAP Allocation - Additional	0	1,521	0	1,521	0	0
Groundwater <sup>(a)</sup>	2,244	0	2,244	0	1,337	1,337
CAGR	0	1,581	0	1,581	907	3,102
<b>TOTAL DIRECT USE</b>	<b>2,244</b>	<b>4,439</b>	<b>2,244</b>	<b>4,439</b>	<b>2,244</b>	<b>4,439</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-13  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of El Mirage  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	508	0	508	0	0
Groundwater	460	460	460	460	460	460
Effluent	560	560	560	560	560	560
CAGR	0	2,475	0	2,475	0	2,983
<b>TOTAL DIRECT USE</b>	<b>1,020</b>	<b>4,003</b>	<b>1,020</b>	<b>4,003</b>	<b>1,020</b>	<b>4,003</b>



Table C-14  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Glendale  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	7,138	14,183	7,138	14,183	7,138	14,183
CAP Existing - Other <sup>(a)</sup>	0	1,814	0	1,814	0	1,814
CAP Allocation - Additional Direct Use	0	629	0	629	0	0
CAP Allocation - Additional Recharged <sup>(b)</sup>	0	2,424	0	2,424	0	0
GRIC Settlement Lease - Direct Use	0	0	0	0	0	0
GRIC Settlement Lease - Recharged <sup>(b)</sup>	0	5,857	0	0	0	0
Groundwater	5,545	5,545	5,545	5,545	5,545	5,545
Other Surface Water <sup>(c)</sup>	325	401	325	401	325	401
SRP and or Other ID Water	31,173	46,668	31,173	46,668	31,173	46,668
Effluent - Direct Use	0	278	0	278	0	906
Effluent - Recharged <sup>(b)</sup>	0	629	0	629	0	0
<b>TOTAL USE<sup>(d)</sup></b>	<b>44,182</b>	<b>78,428</b>	<b>44,182</b>	<b>72,571</b>	<b>44,182</b>	<b>69,518</b>
<b>TOTAL DIRECT USE</b>	<b>44,182</b>	<b>69,518</b>	<b>44,182</b>	<b>69,518</b>	<b>44,182</b>	<b>69,518</b>

Notes:

- (a) Includes an Indian lease.
- (b) To complete the water balance, a certain quantity of water is shown to be recharged for this entity.  
It is possible, however, that instead of recharging the water not needed for direct use (using this water use scenario), the entity would directly use the water and correspondingly offset their groundwater pumping.  
In either case, the incremental impacts would be the same.
- (c) Includes Roosevelt Conservation Space water and Wellton-Mohawk exchange.
- (d) Total use includes direct use and recharge.

Table C-15  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Goodyear  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	3,378	3,381	3,378	3,381	3,378	3,381
CAP Allocation - Additional	0	7,211	0	7,211	0	0
GRIC Settlement Lease	0	5,857	0	0	0	0
Groundwater	648	648	648	648	648	648
SRP and or Other ID Water	1,082	23,008	1,082	23,008	1,082	23,008
Effluent	0	3,360	0	3,360	0	3,360
CAGRD	0	32,753	0	38,610	0	45,821
<b>TOTAL DIRECT USE</b>	<b>5,108</b>	<b>76,218</b>	<b>5,108</b>	<b>76,218</b>	<b>5,108</b>	<b>76,218</b>

Table C-16  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
H2O Water Company  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Additional	147	147	147	147	0	0
CAGRD	10	221	10	221	157	368
<b>TOTAL DIRECT USE</b>	<b>157</b>	<b>368</b>	<b>157</b>	<b>368</b>	<b>157</b>	<b>368</b>

Table C-17  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Mesa  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	19,067	36,388	19,067	36,388	18,977	36,388
CAP Existing - Other <sup>(a)</sup>	0	4,211	0	4,211	85	4,211
CAP Allocation - Additional Direct Use	0	7,115	0	6,933	0	0
CAP Allocation - Additional Recharged <sup>(b)</sup>	0	0	0	182	0	0
GRIC Settlement Lease - Direct Use	0	3,389	0	0	0	0
GRIC Settlement Lease - Recharged <sup>(b)</sup>	0	2,468	0	0	0	0
GRIC Exchange - Direct Use	0	0	0	0	0	0
GRIC Exchange - Recharged <sup>(b)</sup>	0	23,540	0	0	0	0
Groundwater	10,587	10,587	10,587	10,587	10,587	10,587
Other Surface Water <sup>(c)</sup>	3,272	5,040	3,272	5,040	3,272	5,040
SRP and or Other ID Water	44,605	55,000	44,605	55,000	44,605	55,000
Effluent - Direct Use	959	959	959	4,530	964	11,463
Effluent - Recharged <sup>(b)</sup>	0	10,504	0	6,933	0	0
<b>TOTAL USE<sup>(d)</sup></b>	<b>78,490</b>	<b>159,201</b>	<b>78,490</b>	<b>129,804</b>	<b>78,490</b>	<b>122,689</b>
<b>TOTAL DIRECT USE</b>	<b>78,490</b>	<b>122,689</b>	<b>78,490</b>	<b>122,689</b>	<b>78,490</b>	<b>122,689</b>

Notes:

- (a) Includes SRPMIC Settlement water, HIDD water, and Indian leases.
- (b) To complete the water balance, a certain quantity of water is shown to be recharged for this entity.  
It is possible, however, that instead of recharging the water, the entity would directly use the water and correspondingly offset their groundwater pumping. In either case, the incremental impacts would be the same. Recharge could be accomplished using direct or in-lieu facilities. Specific types of water are shown as recharged for convenience in the draft EIS analysis. Actual recharge patterns may differ.
- (c) Includes Roosevelt Conservation Space water and Wellton-Mohawk exchange.
- (d) Total use included direct use and recharge.

Table C-18  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Metropolitan Domestic Water Improvement District  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	8,858	0	8,858	0	0
CAP Allocation - Additional	0	4,602	0	4,602	0	0
Groundwater <sup>(a)</sup>	8,985	0	8,985	0	8,858	8,858
CAGR	0	6,007	0	6,007	127	10,609
<b>TOTAL DIRECT USE</b>	<b>8,985</b>	<b>19,467</b>	<b>8,985</b>	<b>19,467</b>	<b>8,985</b>	<b>19,467</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-19  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Town of Oro Valley  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	2,294	0	2,294	0	0
CAP Existing - Other <sup>(a)</sup>	0	3,557	0	3,557	0	0
Groundwater <sup>(a)</sup>	5,509	0	5,509	0	2,294	2,294
CAGRD	0	12,560	0	12,560	3,215	16,117
<b>TOTAL DIRECT USE</b>	<b>5,509</b>	<b>18,411</b>	<b>5,509</b>	<b>18,411</b>	<b>5,509</b>	<b>18,411</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-20  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Peoria  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	4,613	18,709	4,613	18,709	4,613	18,709
CAP Allocation - Additional	0	5,527	0	5,527	0	0
GRIC Settlement Lease	0	5,857	0	0	0	0
Groundwater	2,423	2,423	2,423	2,423	2,423	2,423
SRP and or Other ID Water	9,469	12,780	9,469	12,780	9,469	12,780
CAGR D	0	17,835	0	23,692	0	29,219
<b>TOTAL DIRECT USE</b>	<b>16,505</b>	<b>63,132</b>	<b>16,505</b>	<b>63,132</b>	<b>16,505</b>	<b>63,132</b>

Table C-21  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Phoenix  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	98,976	113,914	98,976	113,914	98,976	113,914
CAP Existing - Other <sup>(a)</sup>	0	21,368	0	21,368	0	21,368
CAP Allocation - Additional	0	8,206	0	8,206	0	0
GRIC Settlement Lease	0	5,857	0	0	0	0
Groundwater	34,822	34,822	34,822	34,822	34,822	34,822
Other Surface Water <sup>(b)</sup>	0	78,619	0	78,619	0	78,619
SRP and Other ID Water	155,776	256,652	155,776	256,652	155,776	256,652
Effluent	0	41,541	0	41,541	0	41,541
CAGRD	0	16,362	0	22,219	0	30,425
<b>TOTAL DIRECT USE</b>	<b>289,574</b>	<b>577,341</b>	<b>289,574</b>	<b>577,341</b>	<b>289,574</b>	<b>577,341</b>

Notes:

(a) Includes SRPMIC Settlement water, HIDD water, and Indian leases.

(b) Includes Gateway, Roosevelt Conservation Space water and Wellton-Mohawk exchange.



Table C-22  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Scottsdale  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	25,171	49,029	25,171	49,029	25,171	47,275
CAP Allocation - Existing Recharged <sup>(a)</sup>	0	0	0	0	0	1,754
CAP Existing - Other <sup>(b)</sup>	0	14,040	0	14,040	0	14,040
CAP Allocation - Additional Direct Use	0	2,981	0	2,530	0	0
CAP Allocation - Additional Recharged <sup>(a)</sup>	0	0	0	451	0	0
GRIC Settlement Lease	0	797	0	0	0	0
GRIC Settlement Lease - Recharged <sup>(a)</sup>	0	5,060	0	0	0	0
Groundwater	12,157	12,157	12,157	12,157	12,157	12,157
Other Surface Water <sup>(c)</sup>	0	0	0	0	0	0
SRP and Other ID Water	19,574	24,131	19,574	24,131	19,574	24,131
Effluent - Direct Use	0	1,000	0	2,247	0	6,532
Effluent - Recharged <sup>(a)</sup>	0	5,532	0	4,284	0	0
TOTAL USE <sup>(d)</sup>	56,903	114,727	56,903	108,870	56,903	105,889
TOTAL DIRECT USE	<b>56,903</b>	<b>104,135</b>	<b>56,903</b>	<b>104,135</b>	<b>56,903</b>	<b>104,135</b>

Notes:

- (a) To complete the water balance, a certain quantity of water is shown to be recharged for this entity.  
It is possible, however, that instead of recharging the water not needed for direct use (using this water use scenario), the entity would directly use the water and correspondingly offset their groundwater pumping.  
In either case, the incremental impacts would be the same.
- (b) Includes SRPMIC Settlement water, HIDD water, and Indian leases.
- (c) Includes Roosevelt Conservation Space water and Wellton-Mohawk exchange.
- (d) Total use includes direct use and recharge.

Table C-23  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Town of Superior/Arizona Water Company - Superior  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	285	285	285	285	0	0
CAGRD	208	240	208	240	493	525
<b>TOTAL DIRECT USE</b>	<b>493</b>	<b>525</b>	<b>493</b>	<b>525</b>	<b>493</b>	<b>525</b>

Table C-24  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Surprise  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	2,812	7,373	2,812	7,373	2,812	7,373
CAP Existing - Other <sup>(a)</sup>	0	738	0	738	0	738
CAP Allocation - Additional	0	2,876	0	2,876	0	0
Groundwater	791	791	791	791	791	791
SRP and Other ID Water	2,751	19,823	2,751	19,823	2,751	19,823
Effluent	0	3,584	0	3,584	0	3,584
CAGR	0	21,381	0	21,381	0	24,257
<b>TOTAL DIRECT USE</b>	<b>6,354</b>	<b>56,566</b>	<b>6,354</b>	<b>56,566</b>	<b>6,354</b>	<b>56,566</b>

Notes:

(a) Includes SRPMIC Settlement water.

Table C-25  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
City of Tucson  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	138,920	0	138,920	0	138,920
CAP Allocation - Additional	0	8,206	0	8,206	0	0
Groundwater <sup>(a)</sup>	110,415	44,733	110,415	44,733	110,415	44,733
CAGR	0	1,564	0	1,564	0	9,770
<b>TOTAL DIRECT USE</b>	<b>110,415</b>	<b>193,423</b>	<b>110,415</b>	<b>193,423</b>	<b>110,415</b>	<b>193,423</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-26  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Vail Water Company  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Existing	0	786	0	786	0	786
CAP Allocation - Additional	0	1,071	0	1,071	0	0
Groundwater <sup>(a)</sup>	568	0	586	0	586	0
CAGR	0	1,741	0	1,741	0	2,812
<b>TOTAL DIRECT USE</b>	<b>568</b>	<b>3,598</b>	<b>586</b>	<b>3,598</b>	<b>586</b>	<b>3,598</b>

Notes:

(a) Year 2001 groundwater use reflects transition of using CAP supplies.

Table C-27  
CAP Allocation Draft EIS  
M&I Sector Water Uses

Summary of Projected Water Uses Per Alternative  
Valley Utilities Water Company  
(af)

Alternative Year	Settlement Alternative		Non-Settlement Alternatives 1 and 3B		No Action Alternative and Non-Settlement Alternatives 2 and 3A	
	2001	2051	2001	2051	2001	2051
CAP Allocation - Additional	250	250	250	250	0	0
CAGRD	843	2,359	843	2,359	1,093	2,609
<b>TOTAL DIRECT USE</b>	<b>1,093</b>	<b>2,609</b>	<b>1,093</b>	<b>2,609</b>	<b>1,093</b>	<b>2,609</b>